

# **Information on**

## **The '99 Kyoto Aerosol-Cloud Workshop**

**(The CCSR COE Symposium/3rd Aerosol-Cloud Remote Sensing Workshop)**

A workshop on satellite-remote sensing of aerosols and clouds and its climate study applications

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#### **1. Outline of the workshop**

\* Place: Kyoto, Japan

\* Date: Dec. 1-3 (Wed.-Fri.), 1999

(Note: ADEOS/ADEOS2 workshop in Kyoto, Dec. 6-10, 1999)

\* Convenor: Teruyuki Nakajima (CCSR, U. Tokyo)

## 2. Abstract

Aerosol and cloud impacts on the earth's climate become a recent hot topic in climate studies. Having near future earth observing satellites, EOS-AM1, ENVISAT and ADEOS-2, it will be a good timing to discuss how to obtain and use the microphysical parameters of aerosols and clouds for studying their climate impacts. Center for Climate System Research (CCSR) of the University of Tokyo invites you to 'Symposium on synergy between satellite-remote sensing and climate modeling in aerosol and cloud issues.' Here, we like to discuss the current and future issues in the remote sensing of aerosol and cloud microphysical parameters and their climate modeling studies. This workshop is also one of workshop series on aerosol remote sensing held in 1996, Washington D. C., and Meribel, France in 1999.

It should be reminded that NASDA/ADEOS-1 & -2 Workshop will be held in the following week (Dec. 6-10, 1999), so that this opportunity will be a perfect period for you to attend two meetings for satellite remote sensing in Japan. A weekend in Kyoto, the old capital of Japan, will add a nice memory to your visiting Japan.

\* Issues in the symposium:

- (1) most recent topics in aerosol and cloud remote sensing,
- (2) utility of satellite products on climate modeling of cloud-aerosol effects

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## 3. Organization

\* Program Committee

T. Nakajima, I. Hirota, Y. J. Kaufman, M. D. King, A. Sumi, and D. Tanre

\* Local Committee

S. Mukai, S. Hayashida, K. Satoh, and T. Takamura

\* Participants

We are expecting a small scale workshop with about 50 persons.

\* Sponsorship: CCSR, NASDA

## 4. Secretariat

\* Ask the details of the meeting to the Secretariat of the workshop:

Aoi TSUCHIYA (Secretariat, CCSR): [aoi@ccsr.u-tokyo.ac.jp](mailto:aoi@ccsr.u-tokyo.ac.jp)

## 5. Accommodation

A block of a hotel in the Kyoto city area is being booked:

Kyoto Royal Hotel

Sanjo-Agaru, Kawaramachi-Dohri Agaru, Nakagyo-ku, Kyoto

TEL: +81-(0)75-223-1234; FAX: +81-(0)223-1702

We will have the meeting in the same hotel. Historic sites are close to the hotel.

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## **6. Time table and procedure for participation**

31 Aug.: Send names of participating persons and the title of the paper,

30 Sept.: Fix the final agenda

15 Nov.: Send an extended abstract of the paper (1 to 7 pages) or copies of your viewgraphs for the presentation

(The last strategy is decided to minimize the preparation for the workshop. Just send your viewgraph copies, color is better, before coming to the workshop. We will distribute these to the audience at the workshop. And your voices will be recorded to produce the workshop report.)

31 March: We are planning to publish a CCSR booklet for summarizing the workshop for distribution)

## **7. Agenda (tentative)**

\* Dec.1 (Wed.)

Session 1: Aerosol remote sensing and modeling studies

10:00-12:00 New remote sensing techniques for aerosol-laden atmospheres

13:30-15:00 (continued)

15:30-17:00 Validation of satellite results with ground-based measurements

and models of aerosols

Welcome party

\* Dec.2 (Thu.)

Session 2: Study of Aerosol and cloud climate effects

10:00-12:00 Remote sensing of aerosol and cloud-laden atmospheres

13:30-15:00 (continued)

15:30-17:00 Radiative forcing and anomalous absorption studies

17:30-19: 00 Poster session with beer and refreshment

\* Dec.3 (Fri.)

Session 3: Research strategies in the EOS era

10:00-12:00 Current and future plan for remote sensing/validation experiments

13:30-15:00 Discussion for the direction of future studies

and possible collaboration, especially for Asia area

Let's make some excursion with group after this (or 2nd day).

**(A rough agenda of ADEOS/ADEOS-II Workshop)**

Kyoto International Conference Hall

Dec. 6-10, 1999

\* Dec. 6

Opening address

On the ADEOS, ADEOS-II Workshop

ADEOS Science Project Report

ADEOS-II Science Project Report

Overview of ADEOS science results

ADEOS multiplatform data

ADEOS-II Satellite overview

Lunch

ADEOS-II Overview

ADEOS-II AMSR/GLI Sensor Report

ADEOS-II Ground Segment Report

ADEOS-II Data Policy

ADEOS-II ILAS Ground Segment Report

ADEOS-II SeaWinds Sensor Development Report

\* Dec. 7-9

Group meetings of AMSR, GLI, ILAS, SeaWinds, and POLDER

Science plenary sessions for atmosphere, ocean and lan may be organized with important papers common to all the sensors.

\* Dec. 10

Closing Session

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## **8. List of papers submitted**

Ackerman, S.: Detecting and tracking dust storms using infrared measurements.

Ackerman, S.: (poster) The Detection of Clouds using GLI.

Boucher O., and D. Tanr  : Estimation of the aerosol perturbation to the Earth's radiative budget using the POLDER satellite aerosol retrievals.

Breon, F.-M.: Global cloud droplet radius analysis from the POLDER polarization measurements.

Curran, R.: On the NASA's Radiation Science Program.

Deuze J.L., P. Goloub, M. Herman, D. Tanre and F.M. Breon: Remote sensing of tropospheric aerosols from POLDER/ADEOS.

Dubovik, O., B.N. Holben, M.D. King, Y.J. Kaufman, A. Smirnov, T.F. Eck and I. Slutsker: The retrieval of aerosol optical properties from AERONET Sun and sky-radiance measurements.

Hansen, J. E.: Aerosol forcing of climate change and "anomalous" atmospheric absorption.

Higurashi, A.: Aerosol remote sensing with NOAA/AVHRR.

Holben, B., O. Dubovik, A. Smirnov, T. Eck, N. Abuhassen, I. Slutsker, W. Newcomb, D. Tanre, Y. Kaufman, N. O'Neill, M. King and T. Nakajima: Aerosol optical properties climatology at selected globally distributed sites from AERONET.

Hu, Y., and B. Wielicki: On tropical deep convection as a limiting case for studies of solar absorption: combined CERES/VIRS/PR/TMI TRMM observations versus theory.

Kaufman, Y. H.: Remote sensing of aerosol direct radiative forcing at the top and bottom of the atmosphere using MODIS and AERONET.

Kawata, Y., and T. Izumiya Retrieval algorithm for aerosol optical parameters using a single channel reflectance-polarization diagram.

Khain , A.: On a spectral microphysics model and cloud-aerosol interaction simulations.

King. M., and S. Platnick: Clouds and radiation from the Earth Observing System.

Lacis, A. A.: Retrieval of aerosol properties from multi-spectral extinction measurements.

Li, Z., and A. P. Trishchenko: Uncertainties in Determining Shortwave Cloud Radiative Forcing and Cloud Absorption due to Clear-sky Variability.

Li, Z., and J. Wong: Retrieval of Smoke Aerosol Properties over Canadian Boreal Forests.

Mishchenko, M.: Global Aerosol Climatology Project: an update.

Moulin, C.: Remote sensing of mineral dust from SeaWiFS spectral measurements.

Mukai, S., I.Sano and Y.Okada: Role of polarization in aerosol retrieval.

Nakajima, T.: A synergy of multi-sensor remote sensing of aerosol and cloud signature.

Remer, L. A.: Satellite remote sensing of aerosol forcing.

Rosenfeld, D., and W. L. Woodley: Convective clouds with sustained highly supercooled liquid water until -38oC.

Sugimoto, N., Z. Liu, Y. Sasano Observations of Clouds and Aerosols Planned with the Space-borne Lidar ELISE.

Sugimoto, N. : New Lidar Techniques for Studying Aerosol-Cloud Interaction.

Schulz, M., T. Claquin, and Y. Balkanski: Modeling the global radiative effect of mineral dust - Consequences of source improvements based on mineralogical data and on inversion techniques using satellite data -.

Sohn, B. J., H. Fukushima, and T. Nakajima : Examining characteristics of Asian dust from SeaWiFS measurements.

Takamura, T., and S. Kaneta: Aerosol optical characteristics over Asia.

Takemura, T., H. Okamoto, A. Numaguti, and T. Nakajima: An aerosol modeling with CCSR/NIES

GCM.

Tanre, D., Y. J. Kaufman, L.A. Remer, B. Chatenet, A. Karnieli, F. Lavenu, O. Dubovik, B.N. Holben, A. Smirnov, S. Mattoo, Dust aerosol size distribution and optical properties derived from remotely sensed data in the solar spectrum.

Tsay, S.-C., G. Wen, R. F. Cahalan, and L. Oreopoulos: Path radiance technique for retrieving aerosol optical thickness over land.

Wielicki, B.: Future strategies for researches of cloud climate effects using laboratory, aircraft, surface, satellite, and global models.

Winker, D.: Strategy for observations of clouds and aerosols with PICASSO-CENA.

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\* Participants without presentation:

R. Frouin, A. Lifermann

## 9. Contacting persons for the workshop

king@climate.gsfc.nasa.gov, kaufman@climate.gsfc.nasa.gov, Didier.Tanre@univ-lille1.fr, sumi@ccsr.u-tokyo.ac.jp, hirota@kugi.kyoto-u.ac.jp, mukai@im.kindai.ac.jp, sato@kugi.kyoto-u.ac.jp, sachiko@ics.nara-wu.ac.jp, takamura@rsirc.cr.chiba-u.ac.jp, b.a.wielicki@larc.nasa.gov, mmishchenko@giss.nasa.gov, clwbr@nasagiss.giss.nasa.gov, clwbr@nasagiss.giss.nasa.gov, jhansen@giss.nasa.gov, herman@tparty.gsfc.nasa.gov, FISCHER@ZEDAT.FU-BERLIN.DE, Isaka@opgc.univ-bpclermont.fr, shigy@sun.ihep.ac.cn, sohnbj@snu.ac.kr, daniel@vms.huji.ac.il, stephens@atmos.colostate.edu, d.m.winker@larc.nasa.gov, herman@loaser.univ-lille1.fr, nakajima@eorc.nasda.go.jp, hakiko@nies.go.jp, hokamoto@crl.go.jp, numa@ees.hokudai.ac.jp, hajime@fksh.fc.u-tokai.ac.jp, kawata@infor.kanazawa-it.ac.jp, asano@mri-jma.go.jp, masuda@mri-jma.go.jp, ymano@mri-jma.go.jp, makato@ics.nara-wu.ac.jp, uchiyama@mri-jma.go.jp, kobay@mri-jma.go.jp, nsugimot@nies.go.jp, pinker@metosrv2.umd.edu, knut@kaja.gi.alaska.edu, stevea@ssec.wisc.edu, lstowe@orbit.nesdis.noaa.gov, ajp@dar.csiro.au, rfrouin@ucsd.edu, dubovik@spamer.gsfc.nasa.gov, ram@fiji.ucsd.edu, jprospero@rsmas.miami.edu, coakley@ats.orst.edu, Brent.Holben@gsfc.nasa.gov, remer@CLIMATE.GSFC.NASA.GOV, zev@snow.tau.ac.il, li@ccrs.emr.ca, gnf@bones.etl.noaa.gov, hayasaka@mail.cc.tohoku.ac.jp, tak@eorc.nasda.go.jp, arking@aa.gsfc.nasa.gov, Zhanqing.Li@CCRS.NRCan.gc.ca, rcurran@hq.nasa.gov, reinout.boers@dar.csiro.au, breon@lsce.saclay.cea.fr, balkanski@lsce.saclay.cea.fr, letreut@ella.ens.fr, seze@lmd.jussieu.fr, parol@loa.univ-lille1.fr, herman@loa.univ-lille1.fr, mdoutri@loa.univ-lille1.fr, boucher@loa.univ-lille1.fr, deuze@loa.univ-lille1.fr, goloub@loa.univ-lille1.fr, vanbauc@loa.univ-lille1.fr, chiapello@loa.univ-lille1.fr, buriez@loa.univ-lille1.fr, duvel@lmdx.polytechnique.fr, fouquart@loa.univ-lille1.fr, moulin@lsce.saclay.cea.fr, Anne.Lifermann@cst.cnes.fr, tsay@climate.gsfc.nasa.gov, khain@vms.huji.ac.il,

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